Computer Engineering Department

A.P. Shah Institute of Technology

G.B.Road, Kasarvadavli, Thane(W), Mumbai-400615

UNIVERSITY OF MUMBAI

Academic Year 2021-2022

Synopsis on

JEDI

(HERE YOUR VOICE MATTERS, TRULY!)

Submitted in partial fulfillment of the degree of
Bachelor of Engineering(Sem-3)
in
Computer Engineering

By
ARUN MATHAI (20102049)
SOHAM KULKARNI (20102018)
KOMAL CHITNIS (20102068)

Under the Guidance of
PROF. AMOL KALUGADE

Abstract

- To build a fault tolerant (well what is the harm in calling it one), decentralized micro-blogging platform to express the fundamental human right i.e. Free Speech .
- Traditional "Social Media" platforms, were never designed to keep their user's opinions at priority.
- The gatekeepers are generally happy as long as they have a huge growing number of daily active users.
- They seldom care about what happens to the user's content and usually turn away when matters concerning privacy or government interference come to limelight.
- We on the other hand, kind of are not happy with the way things are happening, so we thought of a way were in we can bring about newer people respecting technologies onto the pre-existing ones.
- We just intend to to be a twig and hope others help us build the nest.

1.1 Problem Definition

By today web standard, that is the web 2.0 , there really exists no decentralization in reality.Everything is governed by a central authority, which then plays the monopoly. Our project aims to tackle this problem through a relatively new technology knows as IPFS.

- Decentralisation
- Content Archival
- Content Censorship

1.2 Objectives

- To provide our users a platform where they can truly express themselves without the underlying fear of being monitored, profiled and we try our level best to prevent our user's thoughts from being censored.

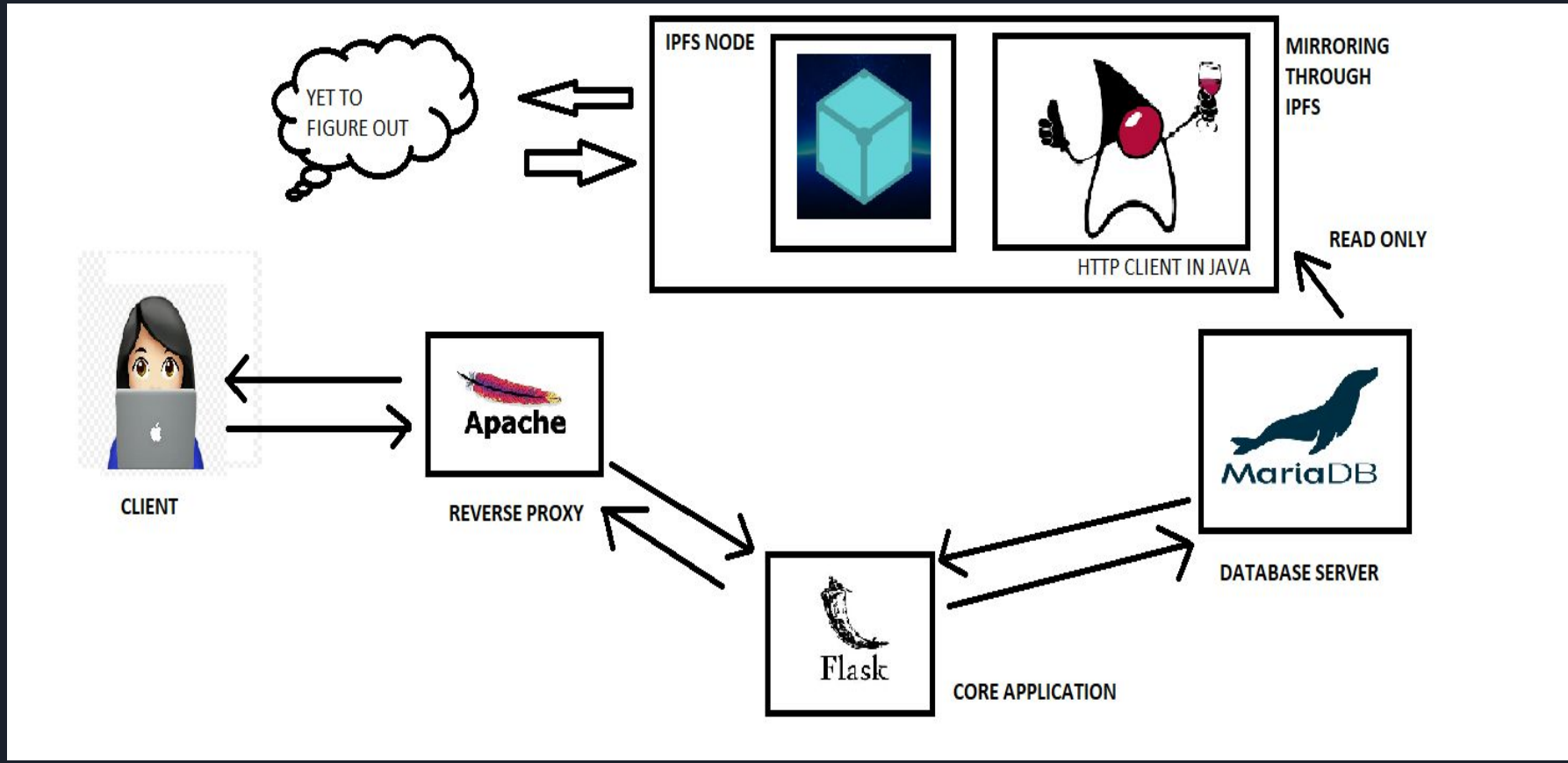
1.3 Scope

- To understand the inner working of IPFS and (design+incorporate) decentralized software system design patterns to existing legacy system architectures.
- To gain insights on fault tolerant systems and data redundancy techniques specifically.
- We intend to implement a working model of the core application as soon as possible and then start working on the IPFS part, for that is our main intend.

1.4 Existing System/project

- As IPFS is a relatively new technology, there aren't many production ready applications/services out there. Some (Quanta) services do exist, but those are purely built on ipfs as a their main storage component. Whereas , our project is a good example as to how one can incorporate IPFS on traditionally architected platforms/services.

Architecture



3.2 Benefits for Society

- A more liberal internet (as it should be).
- A platform which truly empowers its users to be more authentic and not refrain from expressing themselves.
- Our platform would ensure that our voice and opinions stay heard well beyond time and not be muffled by factors in time.

2 Technology stack

- Apache --> As our main reverse proxy
- Flask --> As the backend api component handler
- SQLAlchemy --> As the Object Relational Mapper tool
- MariaDB --> As the database
- Java SE --> As the Http Client for the IPFS node
- IPFS Node --> The IPFS Daemon itself

Thank You